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Mickowski

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[54] DATA ANALYSIS AND DISPLAY METHOD
FOR RECIPROCATING EQUIPMENT IN
INDUSTRIAL PROCESSES

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[56] References Cited

U.S. PATENT DOCUMENTS

3,818,201 6/1974 Hartwich et al. 364/551 X

3,911,419 10/1975 Bates et al. 340/709
3,982,440 9/1976 Groleau et al. 364/552 X
4,094,940 6/1978 Hold 364/476 X
4,249,186 2/1981 Edwards 364/550 X

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[57] ABSTRACT

The data analysis and display system of the present invention utilizes a microcomputer in combination with a CRT and a multiplicity of transducers for monitoring process parameters in the operation of a reciprocating device having a linear stroke. A profile of the process parameters are generated as a function of stroke length, stored in a non-volatile memory and graphically displayed on the CRT as master traces for comparison with current data profiles.

6 Claims, 14 Drawing Figures

